

AD-A216 596

DTIC ACCESSION NUMBER

LEVEL

PHOTOGRAPH THIS SHEET

INVENTORY

A MOST UNLIKELY WAR  
DOCUMENT IDENTIFICATION  
1988

DISTRIBUTION STATEMENT A

Approved for public release;  
Distribution Unlimited

DISTRIBUTION STATEMENT

ACCESSION FOR

NTIS GRA&I

DTIC TAB

UNANNOUNCED

JUSTIFICATION

BY

DISTRIBUTION /

AVAILABILITY CODES

DIST

AVAIL AND/OR SPECIAL

A-1

DISTRIBUTION STAMP

DTIC  
ELECTRIC  
JAN 1 1990  
a E D

DATE ACCESSIONED

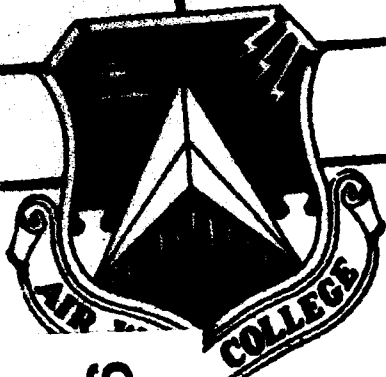
DATE RETURNED

90 01 17 106

DATE RECEIVED IN DTIC

REGISTERED OR CERTIFIED NO.

PHOTOGRAPH THIS SHEET AND RETURN TO DTIC-FDAC



AD-A216 596

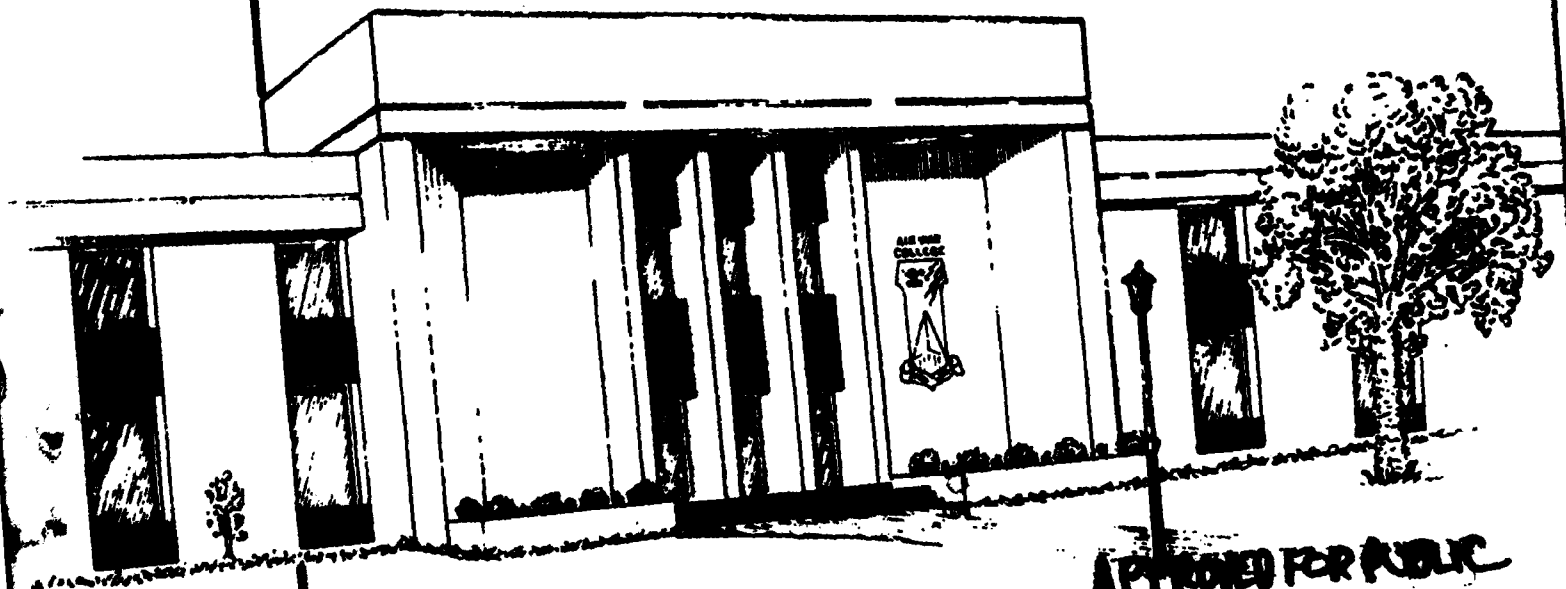
# AIR WAR COLLEGE

## RESEARCH REPORT

A MOST UNLIKELY WAR?  
HIGH TECHNOLOGY AND THE HUMAN DIMENSION  
IN THE FALKLANDS WAR

WING COMMANDER DAVID K. NORRIS

1988



AIR UNIVERSITY  
UNITED STATES AIR FORCE  
MAXWELL AIR FORCE BASE, ALABAMA

APPROVED FOR PUBLIC  
RELEASE, DISTRIBUTION  
UNLIMITED

AIR WAR COLLEGE

AIR UNIVERSITY

A MOST UNLIKELY WAR?

HIGH TECHNOLOGY AND THE HUMAN  
DIMENSION IN THE FALKLANDS WAR

by

David K. Norriss

Wing Commander, RAF

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE RESEARCH

REQUIREMENTS

Research Advisor: Lt Col Gregory D. Florey, USAF

MAXWELL AIR FORCE BASE, ALABAMA

#### DISCLAIMER-ABSTAINER

This research report represents the views of the author and does not necessarily reflect the official opinion of the Air War College or the Department of the Air Force.

This document is the property of the United States Government and is not to be reproduced in whole or in part without permission of the Commandant, Air War College, Maxwell Air Force Base, Alabama.

AIR WAR COLLEGE REPORT ABSTRACT

TITLE: A MOST UNLIKELY WAR? HIGH TECHNOLOGY AND THE HUMAN  
DIMENSION IN THE FALKLANDS WAR

AUTHOR: Wing Commander David K. Norriss, RAF

The somewhat short-lived but bitter conflict between Great Britain and Argentina over sovereignty rights in the Falkland Islands began abruptly and unexpectedly in April 1982. Prior to the outbreak of hostilities, the average British citizen would not have been able to pinpoint the location of these tiny islands let alone identify their relevance to Britain. And yet, without hesitation, a whole nation became incensed by this apparently unwarranted act of aggression against a small group of its people and became embroiled in a war that nobody expected to have to fight.

Some six years later, with economic and social problems reaching a critical stage in the Soviet Union, the prospect of an all out war in Central Europe has diminished. Meanwhile, the emergence of Third World countries, many with access to high technology weapons, offers almost endless opportunities for adventurism in pursuit of a variety of goals. This, together with a probable reduction in global U.S. presence, a huge U.S. budget deficit and a declining birthrate biting into the nations' resources, may well result in unpredictable

conventional conflict in the remotest parts of the world. The British emerged victorious after a brief but intense military exchange, but not without learning or relearning some of the harsh realities of warfare. The impact of high technology weapon systems, the difficulties of projecting military power over great distances, and the over-riding importance of the quality of military personnel, became very apparent. Deficiencies in the handling of the media, casualty reporting and the assistance offered to bereaved relatives prompted much emotional discussion.

The British government has recognized the need to maintain its forces postured to support not only an all-out war in Europe, but also the most unlikely limited conflict in the remotest parts of the globe.

## BIOGRAPHICAL SKETCH

Wing Commander David K. Norriss is a Royal Air Force tactical fighter pilot currently employed on exchange duties with the USAF at Maxwell AFB, Alabama. He most recently commanded a Jaguar fighter/bomber and reconnaissance squadron during which period he spent many months on operational detachments to Northern Norway. He graduated from pilot training in 1971 and after completing a tour as a flying instructor, joined the Jaguar force as the aircraft first entered service in 1975. Wing Commander Norriss has also served with a Jaguar squadron based in West Germany, where he was awarded the Queen's Commendation for Valuable Service in the Air. He has completed the Royal Air Force Advanced Staff Course and is a graduate of the U.S. Air War College, Class of 1988.

# TABLE OF CONTENTS

CHAPTER		PAGE
	DISCLAIMER-ABSTAINER . . . . .	ii
	ABSTRACT . . . . .	iii
	BIOGRAPHICAL SKETCH . . . . .	v
I	INTRODUCTION . . . . .	1
II	SYNOPSIS OF THE CONFLICT AND CHRONOLOGY . . . .	4
	ORDER OF BATTLE AND STATISTICAL LOSS SUMMARIES .	9
III	THE NATURE OF FUTURE CONFLICT . . . . .	19
IV	SIGNIFICANT AREAS OF INTEREST . . . . .	22
	A. The Political Cauldron . . . . .	22
	B. Weapon Systems . . . . .	25
	C. Major Equipment Deficiencies . . . . .	30
V	THE HUMAN DIMENSION . . . . .	40
VI	CONCLUSIONS . . . . .	52



## CHAPTER I

### INTRODUCTION

The Falklands Conflict between Great Britain and Argentina, which took place during April, May, and June of 1982, has been the subject of much discussion and analysis with an abundance of evaluation and recommendations. That conflict, short-lived as it was in the South Atlantic, has continued somewhat bitterly in some areas back home in Britain as the ultimate costs were counted. It was arguably the first North-South war, a subject much in evidence in the Third World press, in which two nations of totally different capabilities, committed small groups of their respective populations in combat. Well-prepared to fight an all out war in Europe against a Soviet enemy, Britain found itself thrust rapidly into a limited war against a weaker adversary in an area considerably further from home shores than had ever been envisioned. An anonymous British self-made philosopher summed up the situation with these words, "The Falklands Conflict was, for Britain, the wrong war at the wrong time in the wrong place but against the right enemy."

The operational success of the Falklands campaign was pronounced in October 1982 by a prominent British military writer, Air Vice-Marshal Stewart W. B. Menaul, RAF (Retired) as,

. . . well planned and brilliantly executed when the odds seemed to be against a successful operation to retake the islands. Firm decisions and determination at Britain's top leadership level set the pattern of successes that were to come. (1:91)

Truly, success did come but recent and more detailed analysis has shown how close the Argentinian Air Force in particular came to reversing the course of the war. In spite of valiant efforts and cooperation at all levels of British industry and military establishments, the technological gaps in the make-up of a force primarily designed for operations in a different theatre caused excessive and otherwise unnecessary losses. The military professionalism and motivation of the British servicemen, the highly effective special operations forces and the limited but skillful use of psychological warfare offset the technological deficiencies and allowed the numerically inferior British task force to emerge victorious.

In addition to some technological weakness, there emerged a British military organization which appeared not to have prepared itself for many of the human aspects of limited warfare. Highly effective and much praised medical care at the battlefield was apparently too often overshadowed by the relatively insensitive inefficiency of the administrative military machine at the homefront. The human dimension has continued to be the subject of much discussed and bitterly contested analysis following the cessation of hostilities.

This paper does not seek to contest the historical or political situations which led ultimately to the conflict, nor

does it attempt to deliberate the moral question of sovereignty over the islands. It seeks to probe those issues which had a significant effect upon the outcome of the war and which would undoubtedly be relevant to any future limited conflicts. In particular, it addresses the problems of defending one's own forces against sophisticated high technology weapon systems and the difficulty of projecting power over great distances. It seeks also to emphasise the over-riding influence which military professionalism on the battlefield and the strength of the homefront activities can have over the outcome of a war.

## CHAPTER II

### SYNOPSIS OF THE CONFLICT AND CHRONOLOGY

The hostilities in the Falkland Islands began on April 2, 1982, when an Argentine invasion force of 2,500 men came ashore. The landing force was backed by Argentina's air-craft carrier, the Vienticinco de Mayo, three missile destroyers and a small fleet of other types. Opposing this invasion force was a Royal Marine contingent numbering less than a hundred men in the Falklands and South Georgia (a dependency of the Falklands). (3:42)

The British military reaction was swift and forceful. On April 5, a mere three days after the invasion, the first large segment of the British task force sailed from Portsmouth Harbor with the light carriers Hermes and Invincible, and 28 other ships. (3:27-28)

Troop deployments to the Falklands began on April 6 with the departure of the landing assault ship HMS Fearless carrying approximately 600 Royal Marines. on the 9th, the Canberra, converted from civilian use, embarked with another 2,000 troops. Three days later the Queen Elizabeth II, also converted from civilian use, embarked with another 3,000 troops. Together their complements comprised a strike force of 5,000 amphibious assault troops that would land at San Carlos Bay. (3:21, 25)

On April 7, Britain declared the area for 200 miles around the Falklands a "war zone." Credibility to this declaration was provided by four British nuclear powered attack submarines reported in the vicinity of the Falklands. The war zone was later redesignated a "total exclusion zone" on April 30. This exclusion applied to any ship or aircraft supporting Argentine forces in the Falklands. It was later extended to within 12 miles of the Argentine mainland on May 7. During the conflict, sea lines of communication were severed by numerous British air and sea attacks upon Argentine ships. While the Argentine air lines of communication were never completely cut off, British air interdiction denied all Argentine aerial resupply of any consequence. (3:20-22)

Around the 16th of April, the task force delayed at Ascension Island for regrouping and adjusting of men and materiel in preparation for combat. Vital to this endeavor was the conduct of practice amphibious landings. (4:21)

On the 25th, a small contingent of the Royal Marine Special Boat Squadron recaptured South Georgia. An Argentine submarine, the Santa Fe, was damaged in the fighting and beached her crew. Audacious action by the marines resulted in the capture of approximately 200 Argentinians, including the Santa Fe's 90-man crew, with minimal bloodshed.

The sea war became deadly serious on May 3, 1982, when the Argentine battleship General Belgrano was sunk with the loss of 368 members of the crew. The Belgrano was attacked

with two W.W. II Mark 8 torpedoes by the Royal Navy nuclear attack submarine HMS Conqueror. (4:83-84)

The following day, HMS Sheffield was struck by an AM-39 Exocet missile. The missile was fired from a flight of ground-based Argentine Navy Super Etendards. The resulting fire could not be contained and the Type-42 destroyer sank with the loss of 20 lives. (5:22)

The bombardment of Port Stanley and Goose Green airfields commenced on April 30, with Sea Harriers from both carriers and a Vulcan from Ascension Island participating, along with several warships of the British Fleet. This bombardment continued virtually unabated until the termination of hostilities. (3:22)

On May 8, an additional 20 Harrier and Sea Harrier aircraft were flown to Ascension with vital air-refueling enroute. Deployed to the Falklands, these aircraft were to prove invaluable in the campaign. Most of them were ferried aboard the Atlantic Conveyor, but were not on the ship when it was sunk on the 25th. (3:22)

On May 14, British forces conducted a daring commando raid on Pebble Island, with both Special Air Squadrons (SAS) and Special Boat Squadron (SBS) troops engaged; 11 aircraft, an ammunition dump, and a radar station were destroyed. This was the most spectacular of the numerous special forces actions conducted by these units throughout the campaign. (3:25)

British amphibious landings commenced at San Carlos Bay on the 21st of May, with over 1,000 troops ashore on the first day. Heavy air attacks on the landing force resulted in 17 Argentine aircraft and 2 helicopters being destroyed, the heaviest day's air casualties of the war. The next day the beachhead was expanded, with about 5,000 troops ashore. But the cost was heavy, as two British frigates, HMS Ardent and HMS Antelope were lost as a result of the air attacks. (3:25)

The 25th of May, Argentina's national day, was marked by intense air attacks on the British Fleet. Britain paid dearly, with the loss of HMS Coventry, a Type-42 destroyer, damage to the frigate Broadsword, and the loss of the container ship Atlantic Conveyor (hit by an AM-39 Exocet). (3:25)

Goose Green and Port Darwin fell on May 27 to the 650 paratroopers of the 2nd Parachute Brigade (2 Para), who captured 1400 Argentines in the process. Unfortunately, 2 Para's gallant commander, Lieutenant Colonel Herbert Jones was among the paratroopers killed in the fighting. (4:25)

On the 1st of June, British troops took Mount Kent on the heights dominating Port Stanley. Five days later, another 3,000 British troops landed, bringing the total British ground combat strength in the islands to around 8,000. (3:26)

The last large Argentine air attack of the war occurred on June 8, with the loss of 11 aircraft. British losses were also great, with heavy damage to the frigate HMS Plymouth and the landing ship Sir Tristram. Finally, severe fire damage

to the landing ship Sir Galahad, brought the total day's casualty list of the British to 55, the heaviest of the war and caused the total loss of 3 vital Chinook heavy lift helicopters. (3:28)

By the 11th of June, British forces were within 10 miles of Port Stanley, and the next day executed a surprise attack on the outskirts of the town which finished the Argentinian forces for all practical purposes. On the 13th, HMS Glamorgan was struck and damaged by an MM-38 land-based Exocet, with 11 crew members killed. The next day, June 14, 1982, the Argentine commander surrendered all Argentine forces in the Falklands, and the conflict was over. (3:28)



## ORDER OF BATTLE AND STATISTICAL LOSS SUMMARIES

The Order of Battle of Forces has been derived from Her Majesty's Stationery Office, London, Cmnd 8758, published December 1982, "The Falklands Campaign--The Lessons."

### THE FALKLANDS CONFLICT - 1982

#### ARGENTINIAN ORDER OF BATTLE

##### (MAJOR UNITS)

1. Navy
  - a. One Aircraft Carrier (About 25 Aircraft)
  - b. One Cruiser
  - c. Four Submarines
  - d. Seven Destroyers
  - e. Three Frigates
2. ARMY
  - a. Est. 9,000 on Falklands (120,000 military reserve in Argentina)
  - b. Misc. Armored Personnel Carriers
  - c. Small Number 105 Self-Propelled Guns
  - d. Anti-Aircraft Missiles and Guns
3. AIR FORCE (Capable of operating to/from FI)
  - a. 75 A-4 Skyhawks (inc. Those Available to Carrier)
  - b. 8 Mirage Interceptors
  - c. 5 Super Entendard Fighter Bombers
  - d. 9 C-130s
  - e. 25 Dagger Ground Attack Fighters

- f. 9 Canberra's
- g. 10 P-2 Neptune Maritime Patrol
- i. Misc. Support and Supply Aircraft

THE FALKLANDS CRISIS - 1982

BRITISH ORDER OF BATTLE

(MAJOR UNITS)

1. ROYAL NAVY

- a. 2 Aircraft Carriers (20 Sea Harriers embarked)
- b. 3 Country Class Light Cruisers
- c. 7 Destroyers
- d. 6 Frigates
- e. 2 Assault Ships
- f. 6 Landing Ship Logistic (LSL)
- g. 7 Royal Fleet Auxiliary Tankers
- h. 3 Survey/Hospital Ships
- i. 1 Ice Patrol Ship
- j. 5 Fleet Class Submarines

2. SHIPS TAKEN UP FROM TRADE (STUFT)

- a. 3 Passenger Liners
- b. 3 Passenger Ro-Ro Ferries
- c. 8 Cargo Ro-Ro Ships
- d. 14 Tankers
- e. 4 Cargo Ships
- f. 1 Offshore Supply Ships
- g. 5 Trawlers
- h. Tugs

3. ARMY

- a. 3 Brigade Consisting of 3 Royal Marine Commando battalions (800 men each) and the 2nd and 3rd Parachute Battalions, supported by Engineers, and 16 light armoured vehicles.
- b. 5 Brigade consisting of 3,000 troops of the Welsh Guards, Scots Guards and The Duke of Edinburgh's Own Gurkha Rifles.

4. ROYAL AIR FORCE

- a. On Ascension Island
  - (1) Up to 4 Nimrods, Maritime Patrol
  - (2) Up to 15 Victor K-2 Tankers
  - (3) Up to 3 Vulcan Bombers
  - (4) Up to 4 F-4 Phantoms, Air Defense
  - (5) Up to 3 Long-Range C-130 Hercules
  - (6) 1 SAR Sea King
- b. With the Task Force
  - (1) Up to 14 Harriers GR-3, Ground Attack

SUMMARY STATISTICS ON AIR COMPONENT LOSSES  
DURING THE FALKLANDS CONFLICT

Argentine Losses (in Aircraft)		United Kingdom Losses (Harrier aircraft/pilots)	
<u>To Sea Harrier</u>		<u>Air-to-Air</u>	
Mirage/Dagger	19	Ground Defenses	0/0
A-4	5	GR3 (RAF) <sup>2</sup>	2/1
Pucara	2	Sea Harrier (RN)	<u>3/0</u>
Canberra	1	<u>Other Causes</u> <sup>3</sup>	
C-130	1		
Helicopter	<u>3</u>	Slid off deck	1/0
	31 <sup>1</sup>	Hit Sea After Launch	1/1
		Collided/Flew into	
		Sea	<u>2/2</u>
<u>To Surface or Ship-to-</u>			4/3
<u>Air Missiles</u>			
Sea Dart	7	Total <sup>4</sup>	9/(5)
Sea Wolf	5	<u>Helicopters</u>	
Sea Cat	6		
Rapier	9	In Action	17
Handheld (Blowpipe)	<u>10</u>	On Atlantic	
	37	Conveyor (9)	
		<u>In Accidents</u>	<u>8</u>
<u>Other</u>		<u>Total</u>	<u>25</u>
4.5" Gun	1		
Small Arms	<u>6</u>		
	7		
Captured or Destroyed			
on Ground	30		
<u>Grand Total</u>	105 <sup>5</sup>		

<sup>1</sup>Twenty-four of the 31 Sea Harrier kills were with the AIM-9L. There were 27 AIM 9L launches with only one hang-up; seven kills were with Aden 30mm guns.

<sup>2</sup>One evidently to Blowpipe.

<sup>3</sup>Includes only Royal Navy Sea Harriers.

<sup>4</sup>One pilot lost after fighting ended.

5The above figures are British, but another British source gives the total as 109 aircraft, with 31 A-4, 26 Mirage Daggers, 23 Pucarás, 9 Aeromachis, 9 Pumas, three Huey Chinnoks, two Canberras, two Sky Vans, one Hercules, and one Lear Jet. These include large numbers of Pucarás destroyed on the ground by Harriers.

# NAVAL LOSSES DURING FALKLANDS CONFLICT

## Argentina

General Belgrano (cruiser, sunk by two submarine-launched Mark 8 WWII torpedoes)

Patrol Vessel (beached, East Falklands)

Submarine (Guppy-class, damaged by helicopter-launched AS-12 missile)

Sorbal (patrol boat, damaged by Lynx-fired Sea Skua missile?)

Narwhal (fishing craft, damaged)

## United Kingdom<sup>1</sup>

Sheffield (DD-42 destroyer, sunk by fires caused by Exocet whose warhead did not explode)

Conventry (DD-42 destroyer, sunk by hits by 500- and 1,000-lb. bombs from 3 or 4 A-4Ps flying at less than 50 feet. and out of hills masking Falkland Sound with 10 miles of radar detectability)

Antelope (D-22 frigate, sunk by concentrated attack by 16 planes on same day, Argentina lost 18 aircraft in attacks on the British fleet)

Sir Galahad (sunk)

Sir Tristram (beached)

(Both unarmed landing craft hit by regular bombs during mass Argentine air attacks during British landings on June 8)

Atlantic Conveyor (sunk by Super Etendard's launching Exocets on first large targets detected on radar at 30 nm)

<sup>1</sup>The Antelope, Ardent, Sir Galahad, Sir Tristram, and Atlantic Conveyor were virtually static targets, operating near land which severely limited radar warning and tracking time.

THE FALKLANDS CONFLICT 1982

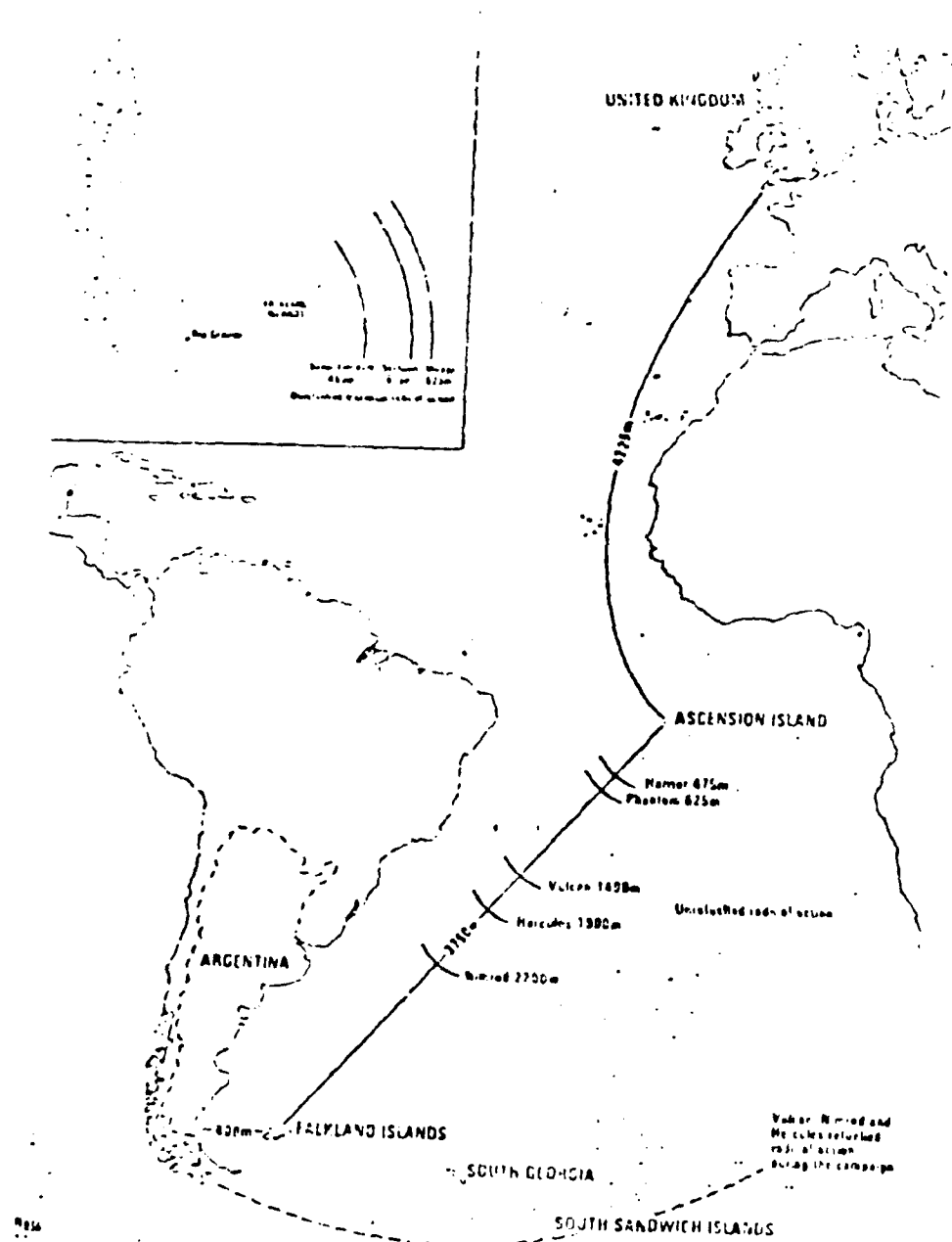
GROUND FORCES LOSSES (as far as is known)

<u>Argentina</u>		<u>United Kingdom</u>	
Killed	1,798	Killed	256
Wounded	1,000	Wounded	674
POW	11,900	POW	1

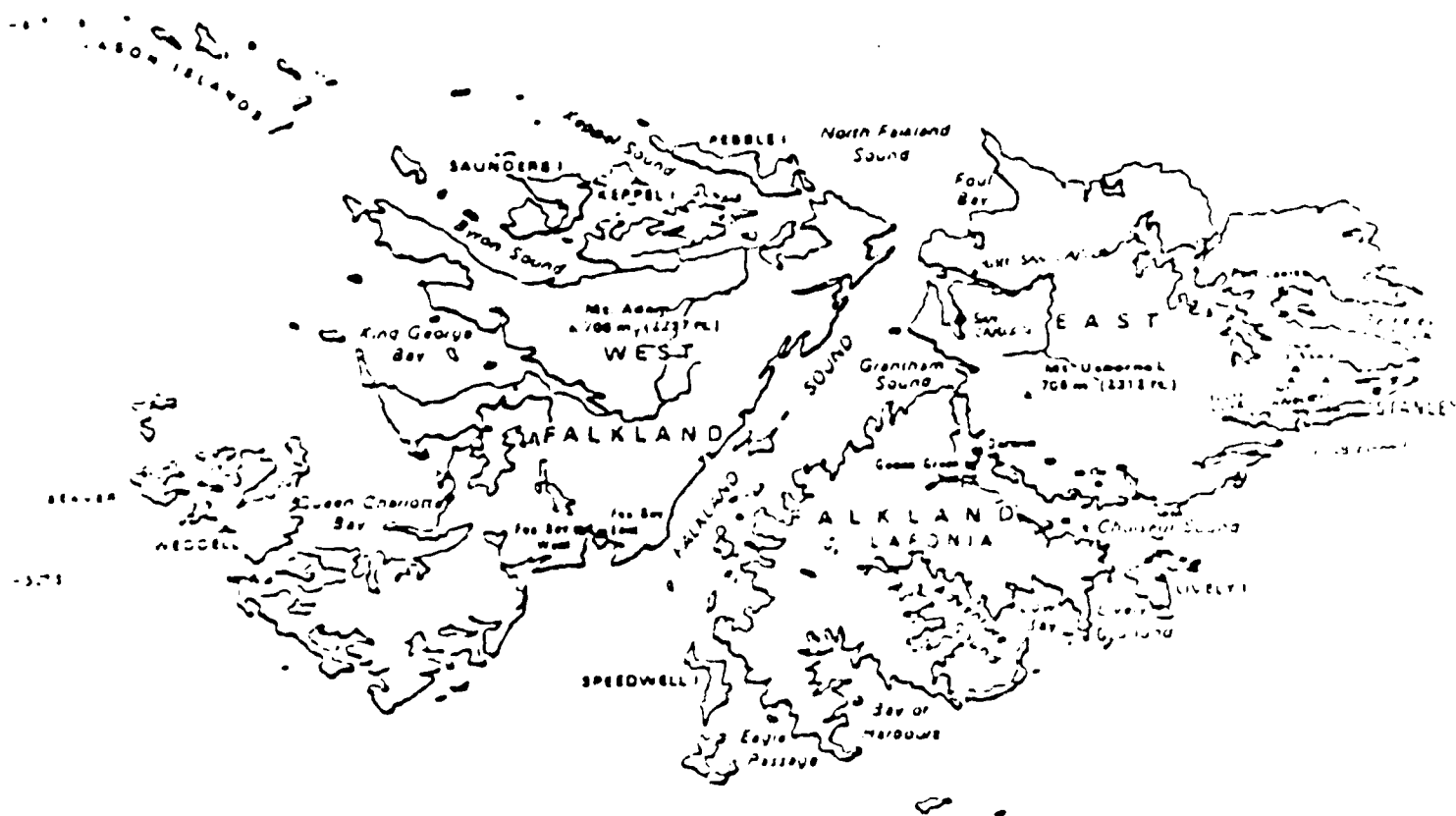
The losses quoted in Chapter IV have been derived from the Air War College Case Study November 1982 entitled "The Falklands Conflict 1982--Implications for the Future." Reprinted with permission is this document from Armed Forces Journal International, September 82, by Anthony H. Cordesman, is a summary of statistical losses.



# Maps of Geographical Areas of Interest

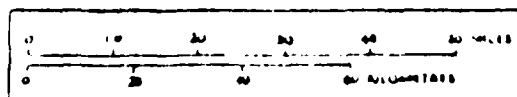


S O U T H A T L A N T I C  
O C E A N



40-44

504



### CHAPTER III

#### THE NATURE OF FUTURE CONFLICT

A war against the Soviet Union in Central Europe would without doubt have the greatest influence upon the nature of the world as it is today. There must be no doubt about the ability or willingness of the NATO alliance to oppose any Soviet aggression in this key area of the globe with the utmost effectiveness. However, prevailing Soviet social and economic problems, together with the emergence of the charismatic leader Mikhail Gorbachev, have begun to make an 'all out' war against the Warsaw Pact increasingly unlikely. In 1982, pre-occupied with the European scenario and constrained by financial and political pressures, the United Kingdom government found itself inadequately prepared to oppose a limited conventional invasion of its sovereign territory, by a relatively inferior adversary at some considerable distance from its home shores. In true British style and with an abundance of improvisation and a fair degree of good fortune, the United Kingdom forces secured a surrender of the Argentinians in just under 10 weeks from the initial outset of aggression. Fortunately for the British, the Argentines were not well prepared to do battle with the UK task force, for in spite of initiating hostilities, this too was a war that the Argentines did not expect to have to fight.

There is little doubt that much of the British success resulted directly from the intense national pride and determination which was sustained throughout the operation. The code name "Operation Corporate" appropriately reflects the cooperation and coordination which existed at all levels amongst the British civilian and military population. Fortunately the issue was clear cut and quickly resolved, for like his American counterpart, the average British citizen seeks rapid and unambiguous resolution to "problems" such as the Falklands Conflict. One wonders how long the public would have offered its unstinting support had success not been so quick or human losses substantially greater. Bitter recrimination in the aftermath of the war has exposed some significant weaknesses in the equipment and organization of a composite military force which engaged in its first limited war for some 25 years. Corrections and improvements must be made if the will of a nation's people is not to be tested beyond its limit in future conflicts. The declining birthrate in the Western world together with the ever increasing costs of maintaining military forces may well result in a reduction in the overall numbers of military personnel with an increased dependence upon high technology devices. Further, it seems likely that the American public will remain fundamentally resistant to the commitment of U.S. personnel to low intensity warfare in remote areas of the world. Also, the capabilities of potential or unexpected adversaries are likely to substantially increase as we move towards the 21st century.

"The nations of the Third World will be pushing hard to buy the latest high technology ships, aircraft, and most important of all, missiles which are now viewed as the greatest equalizers amongst nations." (6:16) The development and availability of high technology weapons systems continues unabated with copious quantities available to those groups which can either afford them or have the political permission to gain a sponsor. Unscrupulous dealers and misguided governments have allowed the deadliest of weapons systems to fall into the hands of tactical and undisciplined people who are willing to make almost any sacrifice to secure their aims. The possibility of having to defend against attack by one's own high technology weapon systems becomes increasingly realistic.

If we are to remain capable of winning this type of war, we must do everything possible to promote the survivability of our dwindling but most valuable assets, the human being. For only with the will and support of its people can a nation hope to emerge victorious.

CHAPTER IV  
SIGNIFICANT AREAS OF INTEREST

The Political Cauldron

It is almost impossible to make an accurate prediction either on the nationality or the points of disagreement with a potential adversary. It may prove equally difficult to forecast the reactions of the most obvious allies. Short of all out war and uncertain of the implications of involvement in limited conventional warfare, many nations seek and are likely to continue to seek a position of public neutrality. Somewhat embarrassed at a quarrel between two of her allies, America initially did not take sides, but acted as mediator in the form of Secretary of State Alexander Haig. Unable to gain concessions by either country on the subject of sovereignty of the islands, the slow-motion diplomacy of Haig came to naught. By the fifth day, the British, desperately short of military intelligence, were pressuring Washington for support together with intercession with the Argentine government. (7:10)

Britain also sought to pressure the Argentinian government through the medium of the United Nations, which, helped to a degree by the unexpected Soviet abstention, passed Resolution 502 calling for the withdrawal of all forces prior to negotiations. The European Community's Council of Ministers agreed to economic sanctions against Argentina surprising themselves not only by the speed of decision but also by the uniformity of

agreement. British reaction to the Community's resolve was, however, one of disappointment and exasperation which greatly overshadowed any perceived reluctance in the involvement by America. Correspondent A. Lefeure reported,

Such reservations (towards even USA support) pale into insignificance beside the contempt felt in Britain for the haggling in the European Common Market, where very limited sanctions against Argentina were being traded for Britain's agreement to higher farm prices. (8:89)

As predicted in the Economist published eight days after the Argentinian invasion, Washington could not maintain a position of neutrality and entered the arena with public support for Britain. America felt compelled to help Britain, not only because of a long-term alliance and friendship but because most Americans believed Britain to be in the right. The appalling record of human rights issues in Argentina and the in-built resistance of American citizens to the attempted resolution of political differences by military means mitigated against siding with Argentina. The fundamental rights of individual freedom as layed down in the Constitution appeared in stark contrast to the probable future of a free people about to be enslaved to a way of life not of its choosing. The American citizen, as predicted, could not and would not tolerate such an outcome and in consequence, American assistance was promptly and appropriately forthcoming.

The U.S. alliance with Britain during the conflict has, however, had some long-term and potentially serious consequences within Latin America. There is some evidence that the U.S.

administration had underestimated both the degree and style of change which had taken place possibly even before the war, but certainly after the conflict. Eduardo Crawley, an Argentine journalist, stated in South magazine: "The colonial issue meets across political differences in this part of the Third World. Britain and America have misread the impact of the conflict on Latin America." Certainly in Latin America, Peru, Venezuela, Bolivia, Panama, and Guatemala, there was strong support of the Argentine occupation of the Falklands. Brazil remained officially neutral; Columbia and Chile were reserved on the issue; most other Latin American countries, including Cuba and Nicaragua, upheld Argentina's right to recover what it regarded as part of its territory. In addition, the Organization of American States (OAS) approved a resolution supporting Argentina's claim whilst Venezuela called for a new inter-American system but without the US as a dominant player. The implications--have much to do with a redefinition of North-South relations. (9:40-41)

Thus, it would appear unwise for any nation to expect immediate and sympathetic response from even those it views as the closest of allies. Implications of involvement in a limited conflict may be too severe to warrant uninhibited support even though it may be at a time when another nation most needs it. In consequence, technological gaps in the total defense make-up of an individual's military force may not be so



obviously filled as would be the case in an all-out general war.

### Weapon Systems

The weapons used by both sides during the Falklands War were drawn from across the whole field of the technological spectrum. A nuclear powered submarine, the Conqueror, sunk the Argentine battleship the General Belgrano with two World War II torpedoes whilst a 1950's technology delta-winged Vulcan's "V-bomber" carried out the only strategic bombing attack of the war. Dramatic as these attacks were, there remains little doubt that the high technology stand off weapon systems inflicted the most devastating and continuous damage to the forces of both combatants. The British suffered most from the effects of the Exocet missile, a weapon system which has its origin ironically just 21 miles from the coast of England in neighboring France. The Argentines, in the main, fell prey to the capabilities of the air-to-air AIM 9L weapon which gave the Harrier aircraft a distinct advantage in the air combat arena.

(10:13)

### Exocet

The first Argentinian attack on the British task force fleet came as a great surprise. Its effect upon British morale both at sea in the war zone, and on the homefront, was out of all proportion to the degree of damage inflicted. Reaction to the loss of 20 lives in this attack was in stark contrast to

the news of 368 Argentine Navy crew members lost from the General Belgrano just 24 hours earlier. The combination of extremely marginal weather, lack of radar warning, and a ship's crew which was not at battle stations allowed an Exocet missile, air-launched from a flight of ground-based Super Etendards, to impact a type 42 Destroyer HMS Sheffield on 4 May 1982. Fortunately for the Royal Navy, the warhead of the missile failed to explode, but the resultant fire which spread rapidly and fiercely amongst the modern ship caused the vessel to be abandoned by its crew before sinking in heavy seas five days later. (11:34-35) Some three weeks later, a cargo ship, the Atlantic Conveyor, which was carrying three huge Chinook helicopters amongst other vital cargo, was hit by an Exocet missile. Once again, the missile did not sink the ship directly but as with HMS Sheffield, it caused a fire so intense that this ship was also lost after some five days. This Exocet, it is believed, was aimed initially at HMS Ambuscade, a type 21 Frigate which successfully diverted the missile by the use of ECM and chaff decoys. The unarmed and unprotected Atlantic Conveyor offered the most lucrative target and was in consequence struck a fatal blow. The only other Exocet missile which reached the British fleet was fired at the guided missile destroyer HMS Glamorgan from a surface launcher located in the area of East Falkland. The ship detected the incoming missile on its radar and promptly turned towards the threat causing the missile to strike a glancing blow on the aft area of the hull.

(11:36) The Exocet's warhead exploded just outside the ship's structure, causing moderate damage and some casualties but not sinking the vessel.

Argentina had only five Exocet missiles at its disposal at the start of the war. Given the destructive power of this weapon, it was indeed fortunate for the British that Argentina had not received its requested further purchase of this now famous missile.

#### Conventional Bombs

Other than Exocet, the Argentines had no stand off weapons, nor did they possess any "smart" adaptations of conventional weapons such as the Paveway Laser Guided Bomb (LGB) of U.S. origin. (11:33) They did, however, have considerable numbers of combat aircraft, restricted in many cases by a limited unrefueled range, but with the capability to deliver a variety of conventional bombs and rockets. The extremely low level delivery tactics employed by the Argentinians were essential to degrade ship-borne defense systems as the attacking aircraft were not equipped with ECM. Retardation devices were not used, many delayed action fuses malfunctioned and several weapons were released at altitudes too low to fully arm. Frequently weapons carried to the limit of aircraft range and delivered with enormous skill and daring by the Argentine pilots under the most hazardous of conditions simply failed to explode. Nevertheless, the British lost one destroyer, two

frigates and two unarmed landing craft to the effects of conventional 500-pound and 1,000-pound bombs. All except the destroyer were hit whilst virtually static targets, operating near land which severely limited warning and tracking time. However, as British Air-Vice Marshal Menaul stated after the conflict, "With more reliable bombs, more stand off guided weapons and electronic countermeasures, they would have dealt out a great deal more damage to British ships and could have mounted more destructive attacks on the British ground forces, especially during the initial landing and buildup at the bridge-head." (4:87) Further, one should not ignore the extremely high cost effectiveness of the "dumb" conventional bomb. The publicity afforded the \$200,000 Exocet which sank a \$50 million destroyer has been marked in comparison to that afforded \$5,000 worth of MK80 GP bombs which did the same job. (12:42) The A-4 Skyhawks, albeit some equipped with the British Ferrantiic D126R Isis weapon-aiming system, proved that concentrated attacks by relatively unsophisticated aircraft flown by aggressive and determined pilots can be extremely potent. This should not be forgotten when considering the potential for conflict with Third World air force whose technological capabilities do not match one's own.

#### Air-to-Air and Ground-to-Air Missiles

The British Harrier jump-jet gained a considerable amount of respect from the Argentine Air Force, for it proved a

highly elusive opponent at low altitude. It was, however, the AIM 9L Sidewinder missile which created the greatest envy amongst the Argentine pilots in whose opinion almost any aircraft becomes something to be taken seriously when so equipped. The Harriers fired 27 AIM-9L missiles and with only one hung missile scored 24 confirmed kills out of 26 missiles which left the rails. Ground-to-air and ship-to-air missile systems succeeded in killing off a total of 37 Argentine aircraft whilst only 7 were lost to small arms and ship-mounted guns. (13:46) Hand-held Blowpipe surface-to-air missiles performed very well, claiming 10 Argentine aircraft; regrettably for the British, one Harrier was also apparently inadvertently hit. The Argentine Magic 530 air-to-air missiles were not even roughly equivalent to the AM-9L, being unable to engage at the low altitudes flown by the Argentine pilots for their own protection. The British lost only five Harrier aircraft in air-to-air and ground-to-air engagements with only one pilot killed. These figures include the one Harrier shot down by friendly Blowpipe missiles. There is no doubt that the AIM-9L performed well in this area, giving the British superiority over the inferior quality but greater numbered Argentine combat aircraft. However, a great many aircraft did inflict considerable damage on the task force and although severely restricted, the Argentine airlift to Stanley airfield continued right up to the cessation of hostilities. It does not take great vision to realize that many Third World air bases will have all the ECM and decoy

sophistication lacked by the Argentinians, as well as missiles just possibly more capable than AIM-9L as we progress towards the 21st Century. We must not allow the successes of this particular campaign to cloud the issues of a higher technology scenario.

### Major Equipment Deficiencies

Both combatants began the war with some serious combat equipment deficiencies. The Argentinians in particular lacked ECM equipment for their attack aircraft, together with any sophisticated self defence air-to-air missile system. A desperate shortage of air refueling assets also rendered the large number of Argentine combat aircraft relatively impotent as they operated at the extreme limits of their range around East Falkland. Unable to enhance their capabilities during the conflict, it allowed key elements of the British fleet to remain outside the vulnerable attack range of the Argentine aircraft. (14:49) The British, on the other hand, harnessed all of the ingenuity and might of its strong industrial base and made numerous and detailed modifications to equipment at a rate which far exceeded that believed possible. Most significant were the following:

#### Airborne Early Warning (AEW)

Badly equipped with Airborne Early Warning (AEW) assets, the British have long been forced to rely upon the elderly piston engined MK III Shackleton aircraft derived from

a World War II bomber design. Continuous delays had affected the delivery of the Nimrod AEW, the politically acceptable alternative to the Boeing AWACs E3 Sentry aircraft. Indeed, some five years later, cancellation of the Nimrod AEW aircraft brought about by its poor technical performance has left the RAF still without a plug in this huge gap in its defence network. The loss of HMS Sheffield to Exocet and the very late warning of attack upon shipping operating close into land was a great worry to the British. There is no evidence that the loan of U.S. AWACs aircraft was ever considered politically acceptable, and so the British fitted Sea King helicopters with modified Searchwater radars. The rapid procurement process was made by cutting out many of the monitoring processes and checks normally employed. This system was not available in time to be used during the Falklands War and as a result, the British paid a very high price for the lack of AEW capability. Subsequent to the campaign, the British government has declared its intention to equip each of the operational aircraft carriers with its own organic AEW capability in the form of Searchwater radar-equipped Sea King helicopters. This, together with the increased range of the Sea Harrier over previous naval aircraft, should enhance the total air defence package of the fleet. (13:35)

### Air Refueling Capabilities

The British began the war with only the Victor tanker, the F-4 Phantom and the Harrier aircraft capable of receiving fuel in flight. The Phantom, unable to operate from the small Royal Naval carriers or from any available land based runway were thus limited to the air defence of Ascension Island. A total of 16 tanker aircraft were available in the UK, although some of these had to remain committed to the assigned defence of NATO areas. In an operation strung over some 8,000 miles, there was an urgent need for long maritime surveillance and air transport with attendant tanker support. With rapid improvisation, the British equipped all available Nimrod maritime patrol aircraft, Vulcan bombers and some C130 Hercules transports with a flight refueling receiver capability. In addition, six Vulcans and four Hercules were converted to operate in the tanker role. From initial design to establishing a world record C130 flight duration of 28 hours and 3 minutes took just 5 weeks to complete. (17:53)

Nimrod aircraft with just one extra pilot regularly flew 18 hour missions. The combined efforts of a British civilian and military workforce modified a whole fleet of aircraft which had never been equipped to carry out in-flight refueling in record time. Needless to say, these hastily produced modifications, combat proven in place of normal procurement testing, remain in place with some additional safety and cosmetic improvements. In addition, the Royal Air Force has



acquired six L-1011 Tristar aircraft which are being converted to the tanker role and has transferred a number of its transport VC10 aircraft with modifications to tanker standard. In spite of the somewhat increased difficulty of mastering the probe and drogue skills common to all RAF aircraft, crews rapidly became proficient, and no difficulty was experienced during the long operational flights. (13:35)

### Reconnaissance

Early in the conflict, some Victor tanker aircraft were equipped with radar, photo, and improved navigation systems. These aircraft were employed primarily to provide strategic maritime reconnaissance during the period before the Nimrod gained a refueling capability. Using a buddy system with other Victor tankers, these aircraft conducted both pre-and post-attack reconnaissance of South Georgia Island in 14 hour and 45 minute flights from Ascension Island. (17:53) The lack of good tactical reconnaissance was without question a severe handicap which the task force commander could well have done without. The lack of accurate information on the disposition and size of enemy forces presented additional and unnecessary hazards to British forces. The Royal Air Force currently relies upon two squadrons of Jaguar aircraft equipped with optical cameras and infrared linescan (IRLS) in a fuselage mounted pod. Requiring conventional wet film processing and formal interpretation, the time period required to overfly a

target and return to Ascension Island would have been prohibitive even if tanker support could have been found. During the Falklands conflict, helicopters and the Harrier GR3, which has a reconnaissance capability, were employed but without a great deal of success. The helicopter proved too vulnerable in even this "limited" scenario whilst the tasking and processing support organization did not exist for the Harrier. Furthermore, equipping the Harrier with a reconnaissance pod would have occupied two of its weapon stations at a time when fire power support was likely needed. For future operations, the advantages of including capable air reconnaissance assets must be anticipated and suitable provision made. It may be that new technology will be able to provide an increasing capability for detection and identification, but more importantly, the information must be processed and transmitted quickly enough to be of use to the land force commander. The next generation of tactical reconnaissance aircraft for the RAF will be in the form of Tornado equipped with optical, infra-red and low light sensors, but as yet, there are no development plans for data link or real time transmission to the land commander in the field. Thus, the aircraft will still be constrained to return to its base for interpretation and reporting. In the Grenada operation, where U.S. ground forces located enemy positions "by stumbling over them," there would appear little comfort for future U.S. land commanders given the projected capability of the aging RF4C. (18) As this is an area where NATO assets are

also extremely scarce, there is a need to consider tactical reconnaissance over any battlefield as a prime candidate for some considerable improvement.

#### Offensive Support for Land Forces

Offensive support for the land forces as they moved across the islands, was an important task for air power. To cover the landings at Port San Carlos, the Harrier GR3s were armed with cluster bombs (CBU), rockets, free fall and retarded bombs, and 30 mm cannon. The assault on Darwin and Goose Green was again supported by Harriers using CBU. Once Goose Green had been recaptured, the Harriers were tasked against the defensive portions around Port Stanley. These were not always easy tasks, as one report from a Harrier pilot later shot-down demonstrated:

The Initial Point (IP) was still out in cloud and there was no sign of the Forward Air Controller (FAC). This time, the Air Liason Officer (ALO) asked us to attack target number 2, the second gun. On the first pass neither I nor my wingman saw the target at all. By this time, I had given up hope of successfully attacking a single gun probably camouflaged as neither FAC nor laser target marking was available. I therefore elected to go for another company position which we both attacked and then climbed en route for Hermes. (19:42)

The final report on the campaign stated that the limitations of the traditional method of forward air control of close air support operations were exposed. In the later stages, laser target marking from the ground was used, enabling laser guided bombs to make direct hits on the targets. Laser marking overcomes many of the dangers inherent in ground forces directing

aircraft to a target in close proximity to friendly land forces. It also overcomes many of the difficulties of making direct voice communication between a land force commander and a pilot seeking the relative safety of terrain masking. Simple coding devices to trigger pre-positioned laser marking equipment may also be used to offer greater protection for friendly forces. Most importantly, the pilot of the attacking aircraft is relieved of the most difficult aspect of the attack, identifying the target itself. The pilot shot down during his attacks upon the Argentine position claims that he felt obligated to undertake what he vowed never to do, re-attack. (19:42) If we are to continue to survive to fight on the battlefield, we must not expose our vital air assets searching out the right target. Nor must we allow our own air power to deliver its devastating load upon our own ground forces. We are unlikely to be blessed with an over-abundance of either asset.

#### Shipboard Surface-to-Air Defenses

The Sea Dart medium-range air defence missile and Sea Wolf point-defence missile proved highly effective during the campaign. The known capability of Sea Dart was the most likely reason that the Argentine pilots flew at ultra low level during the final phase of their attacks with consequent poor bomb arming. Sea Wolf, although designed as a defence system against missiles, proved highly flexible with software changes

made to counter low flying aircraft. The threat posed by the Exocet was well understood before the operation, and the Task Force had countermeasures to deal with it. Chaff, for example, was extensively used but was not available to the merchant ships used during the amphibious landings. Successful diversion of Exocet from self-protected Royal Naval warships served to offer the valuable but unprotected commercial shipping as primary targets. Given the modifications that took place to provide helicopter landing platforms and other military services such as refuelling at sea, it would have been prudent to provide a degree of self protection to merchant vessels. For the future, it would be wise to identify those ships which could most appropriately serve to supplement the military fleet and make provision for the fitting of suitable point defence and decoy systems. The weight of additional weapon platforms, or the imposition on space available are not nearly as cost critical as in similar installations on commercial aircraft. The loss of the Atlantic Conveyor to Exocet together with its vital cargo of Chinook heavy lift support helicopters posed an enormous load upon the only remaining aircraft, which flew 150 hours carrying 600 tons of equipment and airlifted 2,180 troops. This could well have been the turning point in the war.

(17:52)

### Ship Survivability

The ships which were struck by the Exocet missile did not sink immediately or, in fact, for some considerable time after weapon impact. Fires which broke out became uncontrollable mainly because of the flammability of furnishing materials, the location of fuel tanks in modern designs, and the lack of adequate fire zone compartments. The unavailability and inadequacy of fire fighting equipment and breathing apparatus, and the insufficient provisioning of suitable clothing complicated the task of the British crews. (13:18) In particular, the high flammability of the humble foam naval mattress has been recorded in testing but without follow up action to effect its replacement. (13:35) The choking noxious fumes which enveloped the stricken ships undoubtedly claimed the lives of crew members, who in spite of valiant efforts could not control the fires. Further, the government report noted that the effectiveness of crews trained to operate self-defence systems had not benefited from adequate training against realistic targets or simulators to prevent full exploitation of the technology available. These deficiencies together with changes to equipment and future warship design have been noted and corrective actions are underway. (13:35)

### Strategic Bomber

The Vulcan bomber, celebrating its 25th year of service, was suddenly thrust into a war after many years of

providing the ultimate deterrent. Undoubtedly, a flight of three Tornado aircraft could have delivered a similar load of conventional bombs as the maximum of 21 x 1000-pound bombs in the bay of the Vulcan. Indeed, the accuracy of the Tornado weapon systems would have been much greater, but the British did not have the tanker capability to get them to the target. One of the Vulcan's bombs struck its target, the runway at Port Stanley, clearly demonstrating the British capability to reach not only the Falkland Islands but also mainland Argentina with conventional bombs. The effect upon morale and the resultant retention of air defence assets in Argentina eased the load upon the British Task Force Commander. The projected cost of maintaining a strategic bomber against further numbers of tactical Tornado strike/attack aircraft with its self survival equipment cannot be justified, and the Vulcan has finally been retired. The enhancement of the tanker force with using huge wide body aircraft with tanker capabilities will in future allow the UK to project its air-power over the distance needed.

## CHAPTER V

### THE HUMAN DIMENSION

The British military demonstrated that it is possible to fight outnumbered and still win even against a force with qualitatively equivalent weapon systems. The difference that offset the Argentine numerical advantage was the human element, in particular, the foot soldiers who marched over the Islands. The British were able to maintain superiority on the battlefield because of their soldier quality, tactical proficiency and the effective employment of technological equipment linked to good command and control. In the final clash of arms, the conflict was ended by the bayonet and not the Exocet missile. It is important that seeking to learn "meaningful" lessons from this conflict should not underestimate the human factor for it may well be the most decisive weapon of all.

#### The Argentine Situation

Argentine forces in the Falklands had spent a month preparing the defenses on the island and should have been in a strong position. They were commanded by General Mario Menéndez, a professional soldier with experience against guerillas in the Argentine provinces. (15:27) Menéndez adopted a defensive posture mainly because of the lower standard of training and physical condition of his inexperienced conscripted soldiers. He was further constrained by a lack of



confidence and discipline between his officer and enlisted men, who had essentially been thrown together for the invasion and lacked the cohesion and professional non-commissioned officer corps of the British units.

Menéndez chose to spread his forces in garrisons around the islands, with plans to transport them where needed by helicopter after the British landing. Logistical support for these garrisons was poor whilst most of the troops assigned to the islands were young and inexperienced. Attempts to reinforce these troops with experienced regular soldiers undermined the effectiveness of the more professional Argentine forces instead of using the more capable troops as a spearhead against the British. Medical care and supplies did not reach the garrisons uniformly in spite of adequate stocks at Port Stanley, and by June illness and fatigue had reduced fighting effectiveness. Morale also had reached a low-ebb with soldiers scavenging for food and shelter who were fed at times by sympathetic islanders, whilst stories of officers living in the warmth and comfort of Port Stanley became common talk amongst the Argentine troops. (20:48) They did not expect to be well led nor did they really expect to win the war for even in the first days of the conflict, the Argentine invaders took the trouble to ensure that the Royal Marines captured at the onset of hostilities would report how they had been well treated. (15:24) To have slaughtered a handful of Marines at the outset of the war would have invited retaliation and the poor treatment of any future

Argentine prisoners of war. A British officer's eyewitness report on the behavior of Argentine prisoners after the fall of Goose Green underscores the critical importance of motivation:

We knew when we went to the Falklands, we would have the same problems [as the Argentines] trench foot, shortage of this and that. The question which decides it all is whether they want to fight. There was not a man in 2 Para (the Second Parachute Brigade) who did not want to take part in that operation. Their weakness, even before we attacked, was that they did not really want to fight. (21:229)

A British sergeant with a perspective equally coloured but clearly marked with sympathy put it more succinctly: (21:22a): "We felt sorry for them, especially the young ones for they didn't really know why they were there."

In contrast, the Argentine Air Force was noteworthy for its professionalism and performed in a highly confident and courageous manner. Trained by the Israelis, the pilots harboured no illusions about British capabilities and were especially respectful of the Harriers, but equally placed supreme trust in their own capabilities. They flew obsolescent aircraft at extended ranges using particularly demanding profiles. Sustaining heavy losses, the Argentine pilots nevertheless inflicted enormously heavy damage upon the British. Only these valiant airmen offered any serious threat to the survival of the British fleet and the campaign that accompanied it. Failure by the Argentine Command to improve the runway at Port Stanley airfield and allow A4 and Etendard aircraft to operate robbed the Argentine pilots of any possible combat

advantage. Had they been able to commence combat missions from the Falkland Islands, they could have forced the British fleet together with its Harrier force, to operate at extreme range with its attendant tactical disadvantage. There could well have been significantly greater British naval losses which may easily have reversed the course of the war.

#### The British Position

The conclusion that troops must demonstrate high morale is incontestible. Caution, however, is necessary in making sweeping generalities about the relative motivation of volunteers and conscripts. The Argentine Navy, with a volunteer professional officer corps, scuttled back to port following the demise of the battleship General Belgrano. Likewise, the Army was led by career officers, although some claims suggest that their professional capabilities were lacking. It may be that class differences and poor leadership contributed more to the Argentine failure than the fact that the soldiers were conscripts. Indeed, draftees highly motivated as in the U.S. forces of World War II and modern West European forces have been accorded high marks for professionalism.

The fact of the matter is that the British had to rely upon the qualities instilled by training and the regimental system to compensate for the limitations of an almost "ad hoc" reshuffling of units to form a composite force. Jeffery Record, writing in the Washington Quarterly noted:

The most important ingredient of Britain's victory in the Falklands was the vastly superior quality of its soldiers, sailors, and airmen, and their cohesion under fire. The war clearly demonstrated once again that the best weapons and the most brilliant strategy and tactics are no substitute for training, leadership, and the ability to sustain unit cohesion under the stress and chaos of combat.

### Land Strategy

The occupation of South Georgia, almost a month before the main landing of the British amphibious force on the Falklands Islands, was followed by intense and persuasive psychological warfare. Surrender posters, General Jeremy Moore's invitation to talk with the Argentine commander on the radio, and a massive deception campaign regarding the actual landing site were persisted in and proved very effective. (21:33) In consequence, the landing at Port San Carlos was virtually unopposed. Later in the war, as the British closed on Port Stanley, a continuous barrage of information was poured upon the enemy. The hopelessness of Argentine situation was stressed, as was the courageous way in which the Argentine soldier has fought against overwhelming odds. Offering an honourable surrender solution to the Latin temperament of the Argentine military personnel was considered to be an essential ingredient in bringing about an early capitulation with its attendant saving of human life. The deception program was sustained throughout the campaign with the much-feared and fearsome Gurkha forces employed in "aggressive patrolling" to persuade the Argentine forces that there were rather more

British soldiers than actually existed. A somewhat chivalrous act, untypical of modern warfare, also occurred during the campaign when a British Army officer attempting to secure the surrender of an Argentine post, ordered a Harrier air strike against a piece of open ground close to the Argentine position. As the Harrier turned to make a further pass, the Argentines surrendered having first witnessed a fire power demonstration on the nearby site. Undoubtedly, a number of Argentine soldiers are alive today as a direct result of these tactics.

#### Night Operations

British forces, particularly the parachute units and the Gurkhas, are proud of their ability to fight at night. Their training is rigorous and consistently emphasizes the ability to conduct offensive night operations. The resultant proficiency in night fighting enabled the British continuously to achieve tactical surprise against the Argentines and negated the Argentine capability of supporting the defence with air strikes. The large number of Argentine night vision devices appears to have had little effect on the British successes at un-illuminated night operations. Indeed, when the British were forced into daylight activity, such as the landings at Bluff Cove, they suffered heavy losses to the Argentine Air Force.

(23:3)

### Special Forces

British Special Air Service (SAS) and Special Boat Service (SBS) units are among the most selectively chosen and highly trained forces in the entire world. They performed two valuable services for the commanding officer of the British land force. Firstly, SAS and SBS teams operating in advance of the main force, provided accurate and timely tactical intelligence which was not available from other technological sources. Information from these elite units and a lack of Argentine capability allowed the British force to land virtually unopposed at Port San Carlos and provided valuable information before the assault on Port Stanley. Secondly, both groups materially inhibited Argentine intelligence by eliminating Argentine patrols and by conducting raids against Argentine positions, and creating confusion as to the British disposition of forces and intentions. The SBS units were, however, hindered by the notorious unreliability of the infamous Johnson outboard motor which powered their stealthy Gemini rubber crafts. On one occasion, two of five patrol craft suffered engine failure and had to be recovered. One crew was picked up by a helicopter from the frigate Antrim, while one managed to land on the last point of land before Antarctica and had to walk back to Leith. An obvious lesson; if the equipment is unreliable in peacetime it will surely fail in war. (20:7)

### Interrogation

The shortage of tactical reconnaissance albeit somewhat offset by the special forces contribution, could have been enhanced by a better system of interrogation of the prisoners of war. Little attempt was made to interrogate senior or specialist Argentine prisoners, with only 90 out of the 593 captured who fell into this category being interviewed. The difficulty appears to have stemmed from a shortage of personnel able to speak the Spanish language. Similar difficulties were experienced whilst attempting to make radio contact with the Argentine forces to help prosecute an early surrender. For the future, the British intend to improve the training of potential interrogators to include more effective use of the Spanish language. Given the situation in Central America, this would appear to be a wise precaution and one which the USA may wish to consider. (24)

### Personal Equipment

The protective clothing and breathing equipment of the Royal Navy personnel has already been identified as somewhat lacking and untested. The British Army soldier also suffered in the extremes of the South Atlantic winter, being apparently rather less well equipped in terms of clothing than his Argentine counterpart. General Jeremy Moore has been criticized since the end of the conflict, for the slow rate of the British advance particularly in the closing stages of the

assault on Stanley. It may be that Moore was moving cautiously to limit British casualties as he recalled the relative ease with which the British Marines had been forced to surrender during the initial Argentine invasion. The weather, however, was adverse with very low temperatures of  $-18^{\circ}\text{C}$  ( $0^{\circ}\text{F}$ ), strong winds, and very wet boggy conditions underfoot. In addition, most soldiers were carrying a 120 pound back pack and weapons. There were a number of cases of exposure whilst many casualties occurred from the dreaded trench foot. (20:40) Certainly there is some evidence that the exceptionally demanding weather conditions of the Falkland Islands winter revealed a number of shortcomings in clothing and personal equipment. Clothing and equipment designed for use in the Scandinavian arctic climate does not appear to have performed as well in the very wet conditions found in the Falkland Islands. Army footwear was found to be most wanting. Replacement of some of these items has already commenced. For the future, loss of effectiveness of the all important soldier through exposure or injury from the use of inadequate equipment cannot be allowed to occur. Protection must be of the highest possible standard.

#### Medical Capabilities

The importance of medical support, which falls into the general category of combat service support, is often overlooked in discussion of programme requirements for high performance weapon systems. Yet, medical evacuation and the care of the



wounded are extremely critical logistical activities that, if not managed properly, will not only result in pointless loss of life but can destroy morale and undermine the effectiveness of a military operation. (15:49)

The British white paper highlights the success of medical support in the Falklands: the lives of 90 percent of the wounded troops were saved; furthermore, some 90 percent of the injured were back with their regiments within six months of the conflict. The savings in economic terms of these returning troops to military budgets are considerable and they add to the cadre of battle-experienced veterans who are an invaluable source of training and expertise for new recruits. Insufficient information is available to calculate the costs avoided by not having to train replacements for the 674 men who returned to their units. It is almost certain, however, that they would have far exceeded the costs of providing the adequate medical care in the South Atlantic.

#### The Human Dimension: "Another Story"

"Another story" is a well named book written by a British author Jean Carr which spells out fundamental truths setting the glamourised public view of the conflict against the tragic human aftermath. For the first time since the Suez crisis, an amphibious task force set out to do battle in a conventional-style war. The armed forces were as unprepared for dealing with the domestic consequences as they were

inadequately equipped militarily. A colonel's wife, who had to cope with many bereaved relatives and friends during the Falklands War said afterwards, "The Falklands War should never have been a learning situation; the services should have been prepared for dealing with the domestic problems of war."

(25:151) The response to many of the bereaved families, and in particular, the families of war-wounded men, revealed attitudes which had not changed since the Second World War, and were completely out of place to an articulate non-conscript generation who had grown-up in a welfare state.

The relationship between the military organization and the media continued in its traditionally "strained" mode during the campaign. Only 27 journalists were allowed to sail with the British Fleet, media representatives were not allowed in a combat zone until after the cessation of fighting, and there were extremely tight controls over access to news and transmitting facilities. Even though news was restricted, there was a good deal of controversy over news that did get through. Lieutenant Colonel Herbert Jones, Commander of 2 Parachute Brigade, believed that Argentine defensive positions of Goose Green had been strengthened before a British assault because of BBC and Ministry of Defence announcements. He threatened to sue of manslaughter after the war but was unable to do so as he was killed during this phase of the battle. John Lattin stated in his book, Fight for the Falklands:

It is a fact that defences were stronger after the BBC report than before it. There was widespread bitter feeling at San Carlos and Goose Green, that not only the BBC but politicians and newspapers were showing a reckless disregard for security. (26:10)

The inability of the Ministry of Defence to coordinate even the simplest information, between its desk-bound Whitehall staff and local service personnel dealing with families of task force members, was marked. Time and again the Ministry released press reports on casualties before service welfare officers had been able to contact the next-of-kin, or it put out partial press releases on casualties without giving details, causing thousands of families needless worry. A brief mention of the five ships hit during the amphibious landings at San Carlos triggered off 5,000 telephone enquiries to one naval desk alone. The loss of a ship, not named until the following afternoon, caused much distress. After the war, the House of Commons Defence Committee held an inquiry into the Ministry of Defence handling of the media during which the press and military officers aired their views. Not consulted, however, were the task force widows, mothers, and wives or the returning veterans who were appalled by what their families had been through. It was not just the lack of information between the military and the media which caused distress, but also the poor communication between the Armed Forces and the bereaved families or those seeking information about injured personnel. (25:153) Claims of military insensitivity continued long after the war when some of the 255 bereaved families received their men's

posthumous South Atlantic medals sent only in insignificant brown mail bags. Survivors of the campaign, in contrast, were frequently photographed at parade ground presentations with notable dignatories in attendance. Others have complained anonymously, for in the British Forces a service cannot complain publicly, that they have had allowances reduced as they are no longer fit for duty. Certainly, there are gaping anomalies between the rights of a disabled civilian and those of a serviceman injured either in peacetime or when sent to war. There appears to be considerable evidence that the British system of providing compensation for war-wounded servicemen is no longer adequate. It was fortunate that generous contributions from the British public offered some assistance in excess of that available under the statutory law in UK. Even the administration of this fund to which people gave so generously is not without considerable criticism, but that is indeed, in itself, another story.

## CHAPTER VII

### CONCLUSIONS

The lessons learned in the Falklands Conflict, as in any other war, must be carefully studied in the context of that war, in that time and place, before an effort is made to apply them elsewhere. A major problem in attempting to reach some conclusions, from this war, particularly in the technological area, stems from the paucity of information and discussion in and from Argentina. Omission of detail leads to incomplete analysis and erroneous conclusions. An even riskier proposition stems from the multitude of variable factors and the great effect which chance can have in the determination of the outcome of a battle; these can camouflage the weight of events and skew the conclusions. All of these were found to varying degrees in the Falklands Campaign. (11:32) At times, an old but valid lesson of war may be disregarded, with the result of combat leading to the relearning of a lesson. The Falklands Conflict was a clearly defined issue between two clearly definable belligerents set within a clearly defined and limited geographical space. The political will of the government and the people of Great Britain was firm and unequivocal. Political guidelines and rules of engagement were clearly defined and allowed senior military commanders to correctly implement national policy. It may not be so simple next time.

An effective command and control system is essential to the success of this type of operation. To take a force structured for NATO operations in Europe, initiate, and support a logistics line 8,000 miles long, assault and retake a sizeable land area in severe weather conditions all within 74 days of an initial invasion was a very impressive feat of arms. (27:887) It would have been much easier had the force been structured with equipment capable of a more diverse application. It would be unwise to compromise the effectiveness of the British forces to meet the European threat in order to provide an out-of-theater capability. Nevertheless, the British have learned that it would be prudent for the future to equip its forces in such a way that projection of power to the remotest part of the globe does not become an impossibility. The acquisition of a heavy strategic bomber for Britain to replace the obsolete Vulcan would not be cost effective, whilst the procurement of an enhanced tanker capability also makes good sense in the European theater. The ability of the British tanker force to transfer fuel within the fleet was crucial to the operations between Ascension Island and the Falklands war zone. Indeed, the need for every operational aircraft to receive fuel in flight should be carefully reviewed.

High technology weapon systems will undoubtedly dominate the future battlefield. So too will the ever diminishing numbers of highly skilled operators and soldiers. Had the Argentines had better equipment, such as ECM and smart weapons,

the battle could possibly have swung the other way. Had the Argentine Army been able to match the determination and aggressive skill of its Air Force comrades, the battle would probably have swung the other way. Had Argentine air power been able to launch from East Falkland, the battle would almost certainly have swung the other way.

The special operations forces used as shock troops, for the collection of information and reconnaissance, and for raiding to disorient the enemy, were highly effective. Well-tested equipment, but with notable unreliability in some cases complicated the task for these and other forces. Known deficiencies in clothing and apparatus led to unnecessary losses of equipment and human life to fires at sea. However, the value of a volunteer fighting force of highly trained and disciplined professionals over a conscript army of large numbers was validated.

High technology weapon systems gave each of the belligerents advantage over the others wherever protection was lacking. The importance of self protection cannot be over emphasised for only he who can survive can fight again another day. The availability of high technology weapons to Third World nations is unlikely to diminish in the foreseeable future. Advances in microchip equipments are becoming cost effective alternatives to large armies, and the possibility of defending against one's own weapon systems becomes increasingly likely.

In the end, the human factor will be decisive. The professionalism and dedication of the modern soldier will most certainly determine the outcome of a future conflict. Declining birthrates and the competition for the services of a dwindling number of healthy professional people will possibly lead to manpower shortages in the armed services of the civilised western world. Human errors led the Argentine government to assume that Britain would not retaliate and in consequence, the 30 day occupation period before the arrival of the British task force was squandered. Defensive positions were inadequately prepared whilst the runway at Port Stanley remained unavailable to Argentine combat aircraft. The cost in equipment and human life was huge. We cannot afford to squander this most valuable asset either through inadequate protection on the battlefield or mismanagement at the homefront. We must not wait until the next war, however unlikely, and however remote from our homeshores to find out if we are capable of winning.



## LIST OF REFERENCES

1. Alford, Jonathan. "A Falklands Test of C<sup>3</sup>I and UK's Philosophy of Command." Excerpts of a speech delivered at Mitre Corporation, Massachusetts, the week of 4-10 October, 1982. Defense Weekly, Oct 12, 1982, pp. 12-14.
2. "Gunboats in the South Atlantic." Time, 12 April 1982, p. 42.
3. "Diary of the Falklands Conflict." Naval Forces. Vol. III, No. 4/1982, pp. 22-32.
4. Menaul, Air Vice-Marshal Stewart W. B., RAF (Ret). "The Falklands Campaign" A War Of Yesterday?" Strategic Review, Fall 1982, pp. 89-91.
5. Kehrli, Caplan Lynn C. (USN), and Phillips, Group Captain C. J. (RAF), editors of "The Falklands Conflict--1982: Implications for the Future." Air War College Guide for Case Study. Air War College, Maxwell AFB, Alabama, November 1982, p. xii.
6. "The Falklands Islands--Further Information," Naval Forces, Vol. III, No. 7/1982, pp. 36-39.
7. Gelb, Leslie H. "Britain Pressing U.S. on Falklands." The New York Times, April 8, 1982, p. 10.
8. Lejeune, Anthony. "Letter from London. Colonel Blimp's Day," National Review. July 23, 1982, pp. 897-898.
9. Crawley, Eduardo. "Latin America Matures: A Growing Independence from Washington." World Press Review. (Excerpted from South/Third World Media) July 1982, pp. 40-41.
10. Zakheim, Dov S. "New Technologies and Third World Contracts," Illustrated Defense 86. No. 4 7-19, July and August 1986, pp. 7-19.
11. Lake, Rear-Admiral Julia S., USN (Ret). "A Tactical Analysis of the South Atlantic War," Naval Forces, Vol. III, No. 6/1982, pp. 32-36.
12. Cordesman, A. H. "Falklands Crisis: Emerging Lessons for Power Projection and Force Planning," Armed Forces Journal, September 82, p. 42.
13. Her Majesty's Stationery Office London. "The Falklands Campaign: The Lessons." Presented to Parliament by the

Secretary of State for Defense, December 1982. Annex C, The Losses, pp. 46-47.

14. Milton, General T. R., USAF (Ret). "Too Many Missing Pieces," Illustrated AF Magazine. 65 4-49, December 1982, pp. 48-49.

15. Brown, James and Snyder, William P. "The Regionalization of Warfare, Part I, The Falkland/Malvinas Island Conflict," Transaction Books. New Brunswick (USA) and Oxford (UK).

16. Garden, Group Captain Timothy MA MPhil RAF. "Technology Lessons of the Falklands Conflict." Brief prepared for presentation at the Ninth Air Power Symposium, Air War College, Maxwell AFB, Alabama, 11-13 March 1985.

17. Corddry, Charles W. "Britain's Near-Thing Victory," Air Force Magazine. December 1982, pp. 50-53.

18. Case Study. "The Grenada Operation," issued to students of the Class of 1988 at the Air War College, Maxwell AFB, Montgomery Alabama, January 1988.

19. Iverson, Sandar R., RAF. "Practice What You Preach." Air Clues. RAF Magazine, January 1984, p. 42.

20. Macdonald, Brian. Proceedings, Fall 1982, Canadian Institute of Strategic Studies. "War in the Eighties: Men Against High Tech," pp. 4-52.

21. Eddy, Paul, and Luklates, Magnus, and Fillman, Paul, (Editors). "The Falklands War: The Full Story," London, Sphere Books. 1982, p. 229. Quoting Major Chris Keeble, the Deputy Commander, No. 2 Parachute Brigade.

22. Dar, Major General E. H., Pakistan Army (Ret). "Strategy in the Falklands War," pp. 22-49. Proceedings. March 1983, Canadian Institute of Strategic Studies.

23. Fields, Colonel Harold T. "Lessons of the Falklands: Training the Key to Victory," Army. March 1983, pp. 3-7.

24. Wettern, Desmond. "Lessons Learned from the Falklands Conflict," 1986.

25. Carr, Jean. Another Storey. Published in Great Britain by Harush Hamilton Ltd., Garden House, Long Acre, London, WC2E 9JZ. 1984.

26. Lattin, John. Fight for the Falklands! New York, NY, Sc. Martin's Press, 1982.

27. Horne, Alistair. "Lessons of the Falklands: A British Historian's Meditations," National Review, July 23, 1982, pp. 886-889.